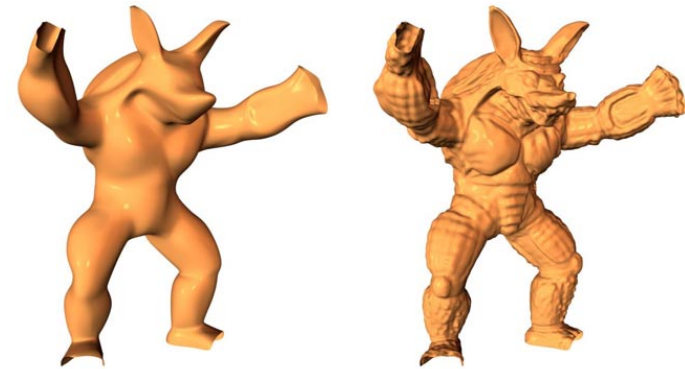


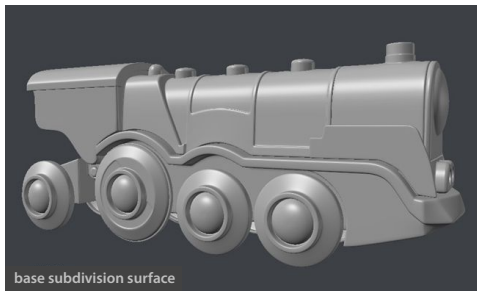
Geometric detail

Lecture 7

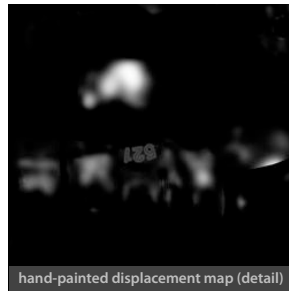
Displacement mapping



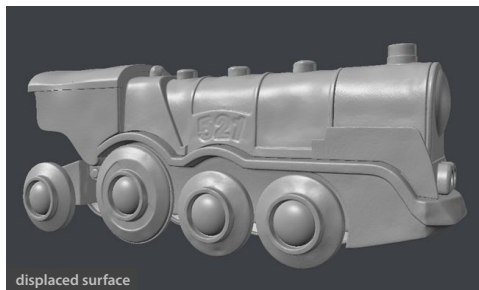
[Lee, Moreton, & Hoppe 2000]



base subdivision surface



hand-painted displacement map (detail)



displaced surface

Pawel Filip
tolas.wordpress.com

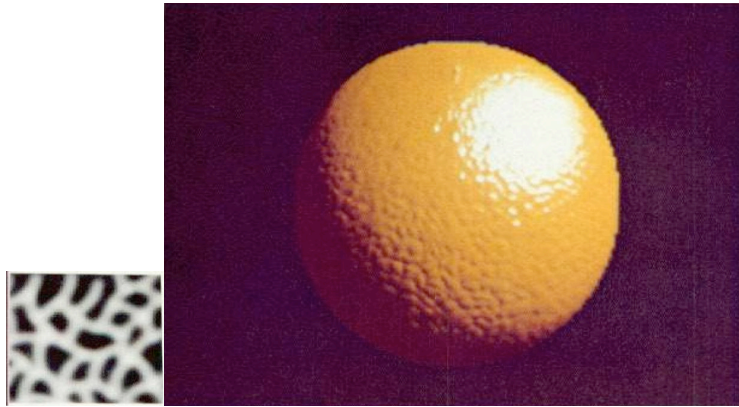


fryrender

physically-based render engine

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Bump mapping

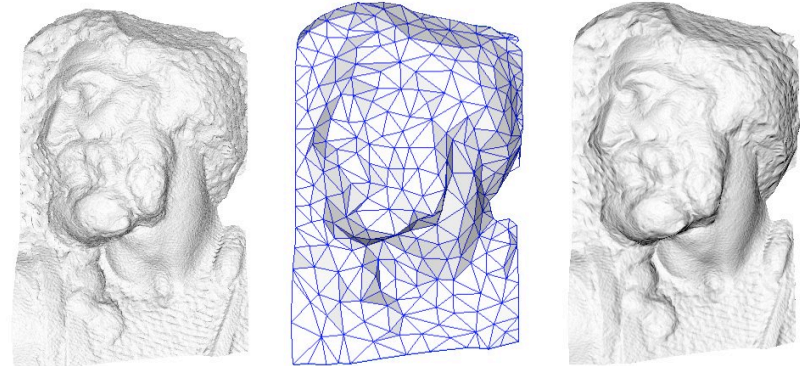


[Blinn 1978]

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Lecture 7 - 5

Normal mapping



original mesh
4M triangles

simplified mesh
500 triangles

simplified mesh
and normal mapping
500 triangles

[Paolo Cignoni]

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Lecture 7 - 6

Terrain rendering

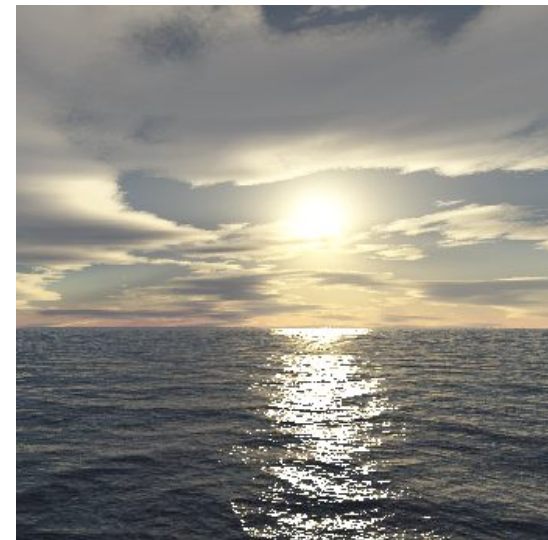


[Premoze, Thompson, & Shirley]

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Lecture 7 - 7

Height field: ocean surface



[Premoze & Ashikhmin]

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Lecture 7 - 8